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DATA MATRIX

	DATAMA	AIRIX				
Date April 19, 2021			EPA Reg No./File Symbol 69261-3		Page 1 of 9	
Applicant's/Registrant's Name & Address DE-Source Inc. 724 Sarcee Street East Kamloops, BC V2H 1E7 CAN			Product Diasource Diatomaceous Earth Grain Storage Insec			
Ingredient Silicon dioxide (CA	AS No.: 7631-86-9; Chemical Code: 72605)					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note	
PRODUCT SPECIFIC DATA REC	QUIREMENTS					
830.1550	Product Identity and Composition	43959301	DE-Source, Inc.	OWN		
830.1600	Description of Materials Used to Produce the Product	43959301	DE-Source Inc.	OWN		
830.1620	Description of the Production Process				Not Required ¹	
830.1650	Description of the Formulation Process	43959301	DE-Source Inc.	OWN		
830.1670	Discussion of Formation of Impurities	43959301	DE-Source Inc.	OWN		
830.1700	Preliminary Analysis	51141501 43959301	DE-Source Inc. DE-Source, Inc.	OWN OWN		
830.1750	Certified Limits	51141501 43959301	DE-Source Inc. DE-Source, Inc.	OWN		
830.1800	Enforcement Analytical Method	43959301	DE-Source Inc.	OWN		
830.6302	Color	43959301	DE-Source Inc.	OWN		
830.6303	Physical State	43959301	DE-Source Inc.	OWN		
830.6304	Odor	43959301	DE-Source Inc.	OWN		
830.6313	Stability to Normal and Elevated Temperatures, Metals and Metal Ions				Waived ²	
830.6314	Oxidation / Reduction: Chemical Incompatibility				Not Required ³	
830.6315	Flammability				Not Required ⁴	
830.6316	Explodability				Not Required ⁵	
830.6317	Storage Stability	43959301	DE-Source Inc.	OWN		
830.6319	Miscibility				Not Required ⁶	
830.6320	Corrosion Characteristics	43959301	DE-Source Inc.	OWN		
830.6321	Dielectric Breakdown Voltage				Not Required ⁷	
830.7000	pH				Not applicable ⁸	
830.7050	UV / Visible Absorption				Waiver ⁹	
Signature A. Juliu			Name and Title Ann M. Tillman, PhD Agent		Date 4/19/2021	



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Date April 19, 2021	EPA Reg No./File Symbol 69261-3 Page 2 of 9			
Applicant's/Registrant's Name & Address	Product			
DE-Source Inc. 724 Sarcee Street East	Diasource Diatomaceous Earth Grain Storage Insectici			
Kamloops, BC V2H 1E7 CAN				

Ingredient Silicon dioxide (CAS No.: 7631-86-9; Chemical Code: 72605)

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.7100	Viscosity				Not Required ¹⁰
830.7200	Melting Point / Melting Range			PL	See endnote ¹¹
830.7220	Boiling Point / Boiling Range				Not Required ¹²
830.7300	Density / Relative Density / Bulk Density	43959301	DE-Source Inc.	OWN	
830.7370	Dissociation Constants in Water				Not applicable ⁸
830.7520	Particle Size, Fiber Length, and Diameter Distribution				Not required ¹³
830.7550	Partition Coefficient (n-octanol/water), Shake Flask Method				Not applicable ⁸
830.7560	Partition Coefficient (n-octanol/water), Generator Method				See 830.7550
830.7570	Partition Coefficient (n-octanol/water), Estimation by Liquid Chromatography				See 830.7550
830.7840	Water Solubility: Column Elution Method, Shake Flask Method			PL	See endnote ¹⁴
830.7860	Water Solubility: Generator Column Method				See 830.7840
830.7950	Vapor Pressure			PL	See endnote ¹⁵
870.1100	Acute Oral Toxicity – rat				Not required ¹⁶
870.1200	Acute Dermal Toxicity – rat				Not required ¹⁶
870.1300	Acute Inhalation Toxicity – rat				Not required ¹⁶
870.2400	Eye Irritation	43712301	DE-Source Inc.	OWN	
870.2500	Skin Irritation	43712302	DE-Source Inc.	OWN	
870.2600	Skin Sensitization				Not required ¹⁶

Signature	Name and Title	Date
ann M. Jellen	Ann M. Tillman, PhD Agent	4/19/2021



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DE-Source Inc.	Diasource Diatomaceous Earth Grain Stora	age Insecticide				
724 Sarcee Street East						
Kamloops, BC V2H 1E7 CAN						
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Ingredient Silicon dioxide (CAS No.: 7631-86-9; Chemical Code: 72605)

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
GENERIC DATA REQUIREMENT	rs				
850.2100	Acute Avian Oral Toxicity	48178402	Valent Biosciences, LLC	PAY	
850.2200	Acute Avian Dietary Toxicity				Not required ¹⁷
850.2400	Wild Mammal Toxicity				Not required ¹⁷
850.2300	Avian Reproductive Toxicity				Not required ¹⁷
850.2500	Simulated or Actual Field Testing				Not required ¹⁷
850.1075	Freshwater Fish Toxicity				Not required ¹⁷
850.1010	Freshwater Invertebrate Toxicity				Not required ¹⁷
850.1025, 850.1035, 850.1045, 850.1055, 850.1075	Acute Toxicity Estuarine and Marine Organisms				Not required ¹⁷
850.1300	Aquatic Invertebrate Life Cycle (Freshwater)				Not required ¹⁷
850.1350	Aquatic Invertebrate Life Cycle (Saltwater)				Not required ¹⁷
850.1400	Fish Early Life Stage (Freshwater)				Not required ¹⁷
850.1400	Fish Early Life Stage (Saltwater)				Not required ¹⁷
850.1500	Life Cycle Fish				Not required ¹⁷
850.1710, 850.1730, 850.1850	Aquatic Organisms Bioavailability, Biomagnification, Toxicity				Waived ¹⁷
850.1950	Simulated or Actual Field Testing for Aquatic Organisms				Not required ¹⁷
850.1735	Whole Sediment: Acute Freshwater Invertebrates				Not required ¹⁷
850.1740	Whole Sediment: Acute Marine Invertebrates				Not required ¹⁷
N/A	Whole Sediment: Chronic Invertebrates Freshwater and Marine				Not required ¹⁷
850.3020	Honey Bee Acute Contact Toxicity				Not required ¹⁷

Signature	Name and Title	Date
1 1	Ann M. Tillman, PhD	4/19/2021
am M. Jelle	Agent	
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DE-Source Inc. 724 Sarcee Street East	Diasource Diatomaceous Earth Grain Stora	age Insecticide				
Kamloops, BC V2H 1E7 CAN						
Ingredient Silicon dioxide (CAS No.: 7631-86-9; Chemical Code: 72605)	·					

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
850.3040	Field Testing for Pollinators				Not required ¹⁷
870.6100	Delayed Neurotoxicity (Acute) – Hen				Not applicable ¹⁸
870.6200	Acute Neurotoxicity – Rat				Not required ¹⁹
870.3100	90-Day Oral: Rodent				Not required ¹⁹
870.3150	90-Day Oral: Non-Rodent				Not required ¹⁹
870.3200	21/28-Day Dermal Toxicity				Not required ¹⁹
870.3250	90-Day Dermal Toxicity				Not required ¹⁹
870.3465	90-Day Inhalation Toxicity				Not required ¹⁹
870.6100	28-Day Delayed Neurotoxicity – Hen				Not required ¹⁹
870.6200	90-Day Neurotoxicity				Not required ¹⁹
870.4100	Chronic Oral Rodent				Not required ¹⁹
870.4200	Carcinogenicity				Not required ¹⁹
870.4300	Combined Chronic Toxicity/Carcinogenicity				Not required ¹⁹
870.3700	Reproduction / Developmental Toxicity Screening Test				Not required ¹⁹
870.3800	2-Generation Reproduction: Rat				Not required ¹⁹
870.6300	Developmental Neurotoxicity Study				Not required ¹⁹
870.5100	Bacterial Reverse Mutation Test				Not required ¹⁹
870.5300, 870.5375	In vitro Mammalian Cell Assay				Not required ¹⁹
870.5385, 870.5395,	In vivo Cytogenetics and Other Effects				Not required ¹⁹
870.5450; 870.5550					
870.7485	Metabolism and Pharmacokinetics				Not required ¹⁹
870.7200	Companion Animal Safety				Not required ²⁰
870.7600	Dermal Penetration				Not required ¹⁹

Signature	Name and Title	Date
	Ann M. Tillman, PhD	4/19/2021
am M. Jeller	Agent	
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EPA Reg No./File Symbol 69261-3

Name and Title

Agent

Ann M. Tillman, PhD

Applicant's/Registrant's Name & Address		Product			
DE-Source Inc.			Diasource Diatomaceous Earth Grain Storage Insecticide		
724 Sarcee Street East					
Kamloops, BC V2F	1 1E7 CAN				
Ingredient Silicon dioxide (CA	AS No.: 7631-86-9; Chemical Code: 72605)				
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.7800	Immunotoxicity				Not required ¹⁹
875.1100	Dermal Exposure – Outdoor				Not required ²¹
875.1200	Dermal Exposure – Indoor				Not required ²¹
875.1300	Inhalation Exposure – Outdoor				Not required ²¹
875.1400	Inhalation Exposure – Indoor				Not required ²¹
875.1500	Biological Monitoring				Not required ²¹
875.1600	Data Reporting and Calculations				Not required ²¹
875.1700	Product Use Information				Not required ²¹
875.2100	Dislodgeable Foliar Residue and Turf Transferable Residues				Not required ²¹
875.2200	Soil Residue Dissipation				Not required ²¹
875.2400	Dermal Exposure				Not required ²¹
875.2500	Inhalation Exposure				Not required ²¹
875.2600	Biological Monitoring				Not required ²¹
875.2700	Product Use Information				Not required ²¹
875.2800	Descriptions of Human Activity				Not required ²¹
875.2900	Data Reporting and Calculations				Not required ²¹
875.3000	Nondietary Ingestion Exposure				Not required ²¹
201-1	Droplet Size Spectrum				Not required ²¹
202-1	Droplet Size Spectrum				Not required ²¹
850.4100	Tier 1: Seedling Emergence				Not required ²²

Date

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724 Sarcee Street East					
Kamloops, BC V2F	I 1E7 CAN				
Ingredient Silicon dioxide (CA	S No.: 7631-86-9; Chemical Code: 72605)				
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
850.4150	Tier 1: Vegetative Vigor				Not required ²²
850.4400, 850.5400	Tier 1: Aquatic Plant Growth				Not required ²²
850.4100	Tier 2: Seedling Emergence				Not required ²²
850.4150	Tier 2: Vegetative Vigor				Not required ²²
850.4400, 850.5400	Tier 2: Aquatic Plant Growth				Not required ²²
850.4300	Terrestrial Field				Not required ²²
850.4450	Aquatic Field				Not required ²²
850.4025	Target Area Phytotoxicity				Not required ²²
850.4550	Cyanobacteria Toxicity				Not required ²²
835.2120	Hydrolysis				Waived ¹⁷
835.2240	Photodegradation in Water				Waived ¹⁷
835.2410	Photodegradation in Soil				Waived ¹⁷
835.2370	Photodegradation in Air				Waived ¹⁷
835.4100	Aerobic Soil Metabolism				Waived ¹⁷
835.4200	Anaerobic Soil Metabolism				Waived ¹⁷
835.4300	Aerobic Aquatic Metabolism				Not required ²³
835.4400	Anaerobic Aquatic Metabolism				Not required ²³
835.1230	Leaching / Adsorption / Desorption				Waived ¹⁷
835.1410	Volatility – Laboratory				Waived ¹⁷
835.8100	Volatility – Field				Waived ¹⁷
835.6100	Soil Field Dissipation Study				Waived ¹⁷
835.6200	Aquatic Sediment Field Dissipation Study				Not required ²³
835.6300	Forest Field Dissipation Study				Not required ²³
		·			·

Date

4/19/2021

Not applicable

Not applicable

Not applicable

Waived²⁴

Waived²⁴



860.1400

860.1400

860.1400

860.1460 860.1900

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Applicant's/Registrant's Name & Address DE-Source Inc.			Product			
			Diasource Diatomaceous Earth Grain Storage Insecticide			
724 Sarcee Street						
Kamloops, BC V2H 1E7 CAN						
Ingredient Silicon dioxide (CA	AS No.: 7631-86-9; Chemical Code: 72605)		I .			
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note	
835.6400	Combination and Tank Mixes				Waived ¹⁷	
835.7100	Ground Water Monitoring				Waived ¹⁷	
850.6100	Environmental Chemistry Methods				Waived ¹⁷	
860.1300	Nature of the Residue: Plants				Waived ²⁴	
860.1300	Nature of the Residue: Livestock				Waived ²⁴	
860.1850	Confined Rotational Crops				Waived ²⁴	
860.1340	Residue Analytical Methods				Waived ²⁴	
860.1360	Multiresidue Method				Waived ²⁴	
860.1380	Storage Stability				Waived ²⁴	
860.1500	Magnitude of the Residue in Plants: post-harvest grain and				Waived ²⁴	
	seed					
860.1520	Magnitude of the Residue in Processed Food or Feed				Waived ²⁴	
860.1480	Magnitude of the Residue in Meat, Milk, Poultry, and Eggs				Waived ²⁴	

Signature	Name and Title	Date
	Ann M. Tillman, PhD	4/19/2021
Com M. Jeller	Agent	

Nature and Magnitude of the Residue in Potable Water

Magnitude of the Residue in Plants Resulting from the Use of

Magnitude of the Residue in Food Handling Establishments

Magnitude of the Residue in Fish

Irrigation Water

Field Rotational Crops

Data Matrix Endnotes for Diasource Diatomaceous Earth Grain Storage Insecticide

- 1 830.1620 These data are not required for the registration of an end use product. See 830.1650 for production process information.
- ² **830.6313 –** These data were waived by EPA. Ref. U. S. EPA Memorandum. Reregistration of Silicon Dioxide and Silica Gel: Product and Residue Chemistry Considerations. Aug. 1, 1999.
- ³ 830.6314 These data are not required as this product does not contain oxidizing or reducing agents. Please refer to the Confidential Statement of Formula for Diasource Diatomaceous Earth Grain Storage Insecticide.
- ⁴ **830.6315** These data are not required as this product does not contain combustible liquids. Please refer to the Confidential Statement of Formula for Diasource Diatomaceous Earth Grain Storage Insecticide.
- 5 830.6316 These data are not required as this product is not potentially explosive. Please refer to the Confidential Statement of Formula for Diasource Diatomaceous Earth Grain Storage Insecticide.
- ⁶ **830.6319** –The product is not an emulsifiable liquid that will be diluted with petroleum solvents. Therefore, these data are not applicable nor are these data required.
- ⁷ **830.6321 –** These data are not required as this product is not registered for use around electrical equipment.
- ⁸ **830.7000**, **830.7370**, **830.7550** These data are not applicable to Diasource Diatomaceous Earth Grain Storage Insecticide because the product is not soluble in water.
- ⁹ **830.7050** EPA approved this waiver request in a letter dated July 8, 2020 based on the April 28, 2010 "Product Chemistry Review of EPA Reg. No. 69261-5." from Bentley C. Gregg to James Parker.
- ¹⁰ **830.7100 –** These data are not required as this product is a solid.
- ¹¹ **830.7200** DE-Source, Inc. is citing public literature data for the melting point of Diasource Diatomaceous Earth Grain Storage Insecticide. The melting point is 1610°C. Ref.: Lewis, K.A., Tzilivakis, J., Warner, D. and Green, A. (2016). An international database for pesticide risk assessments and management. Human and Ecological Risk Assessment: An International Journal, 22(4), 1050-1064. http://dx.doi.org/10.1080/10807039.2015.1133242.
- 12 830.7220 These data are not required as this product is a solid. See 830.7200 for melting point.
- ¹³ **830.7520 –** These data were not required for this product.
- ¹⁴ 830.7840 DE-Source, Inc. is citing public literature data for the water solubility of Diasource Diatomaceous Earth Grain Storage Insecticide Silicon dioxide is insoluble in water. Ref.: NIOSH. NIOSH Pocket Guide to Chemical Hazards & Other Databases. U.S. Department of Health & Human Services, Public Health Service, Center for Disease Control & Prevention. DHHS (NIOSH) Publication No. 2001-145 (CD-ROM) August 2001.
- ¹⁵ **830.7950** DE-Source, Inc. is citing public literature data for the vapor pressure of Diasource Diatomaceous Earth Grain Storage Insecticide. The vapor pressure of silicon dioxide is 0 m Hg. Ref: NIOSH. NIOSH Pocket Guide to Chemical Hazards & Other Databases. U.S. Department of Health & Human Services, Public Health Service, Center for Disease Control & Prevention. DHHS (NIOSH) Publication No. 2001-145 (CD-ROM) August 2001.
- ¹⁶ **870.1100**, **870.1200**, **870.1300**, **870.2600** These data were not required to support the registration of Diasource Diatomaceous Earth Grain Storage Insecticide.
- ¹⁷ According to the EPA. Ref. U. S. EPA Memorandum. Environmental Fate and Ecological Effects Risk Assessment for the Registration Review of Silica. Jan. 16, 2013, these data are not required.
- ¹⁸ **870.6100 –** The data requirement is not applicable to silicon dioxide because is not an organophosphate compound.
- ¹⁹ According to the Nov. 16, 2007 Memorandum Silica and Silicates: HED Registration Review Scoping Document, these data are not required.
- ²⁰ **870.7200 –** These data are not applicable because Diasource Diatomaceous Earth Grain Storage Insecticide is not registered for use on companion animals.

Data Matrix Endnotes for Diasource Diatomaceous Earth Grain Storage Insecticide

²¹ According to the July 3, 1991 EPA Memorandum "Review of Potential Occupational and Residential Exposure to Silicon Dioxide for the Reregistration Eligibility Document (RED)", these data were not required for silicon dioxide.

²² These data were not required to support registration review of Silicon Dioxide (U. S. EPA Silica Gel and Silicon Dioxide Interim Registration Review Decision, Case Number 4081, December 15, 2015).

²³ These data are not required. Silicon Dioxide (diatomaceous earth) does not have aquatic uses.

²⁴ **830.6313** – These data were waived by EPA. Ref. U. S. EPA Memorandum. Reregistration of Silicon Dioxide and Silica Gel: Product and Residue Chemistry Considerations. Aug. 1, 1999.